

**Spandau
pumpen**

by EBARA

PRK - Centrifugal pumps, hydrostatic sealing

Data Book 50/60Hz



Quality Management
ISO 9001: 2015

Environmental Management
ISO 14001:2015



www.ebaraeurope.com



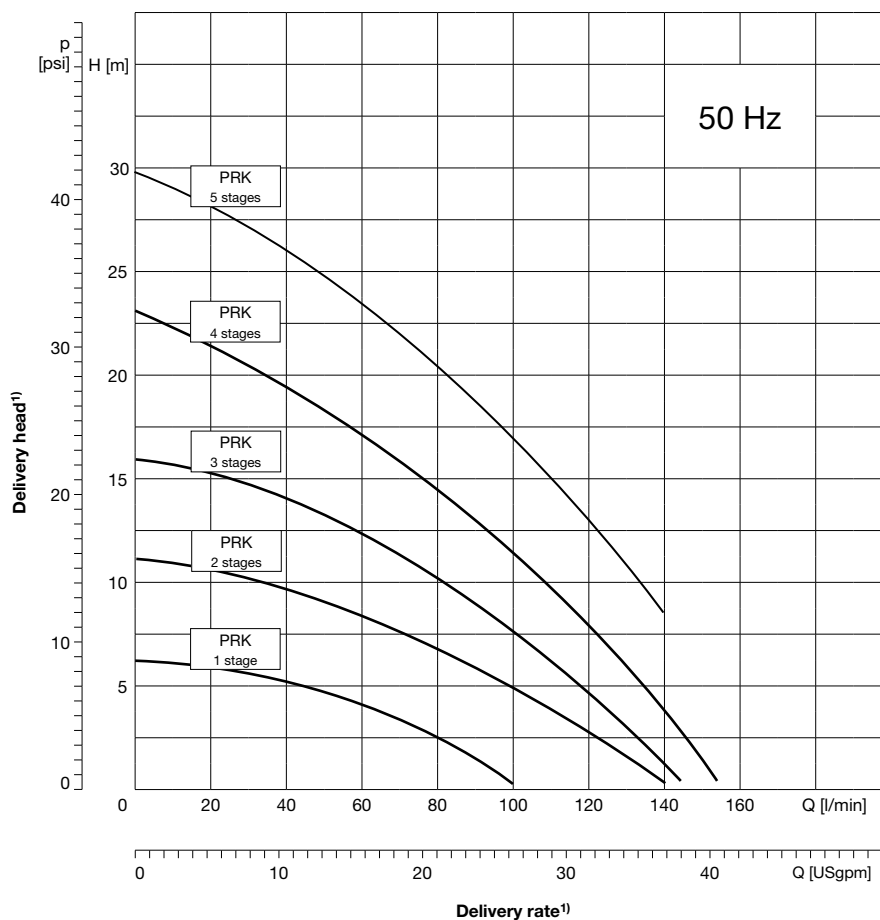
PRK – Immersion pumps, hydrostatic sealing

50Hz single frequency, open impellers



Features

- Vertical multistage pump, hydrostatic sealing
- For delivery of slightly contaminated types of fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G3/4
- Wide range of immersion depths 90-410 mm



Technical data

Delivery rate Q_{max}	175 l/min
Delivery head H_{max}	29 m
Immersion depth t_{max}	375 mm
Kinematic viscosity	max. 20 mm ² /s
Delivery temperature	+5 °C to +60 °C
Grain size	max. Ø3 mm
Contamination	max. 50 g/m ³
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Emulsions, cooling and cutting oils, cleaning liquids, water, mild acids

Mechanical design

Component	Material
Flange	POM
Base	PPS
Shaft	Stainless steel 1.4122
Impeller	POM
Diffuser	PP
Intermediate chamber	PPS
Bearings	Deep groove ball bearing with covering disk
Pumps bottom	PP
Elastomers	NBR

Variations

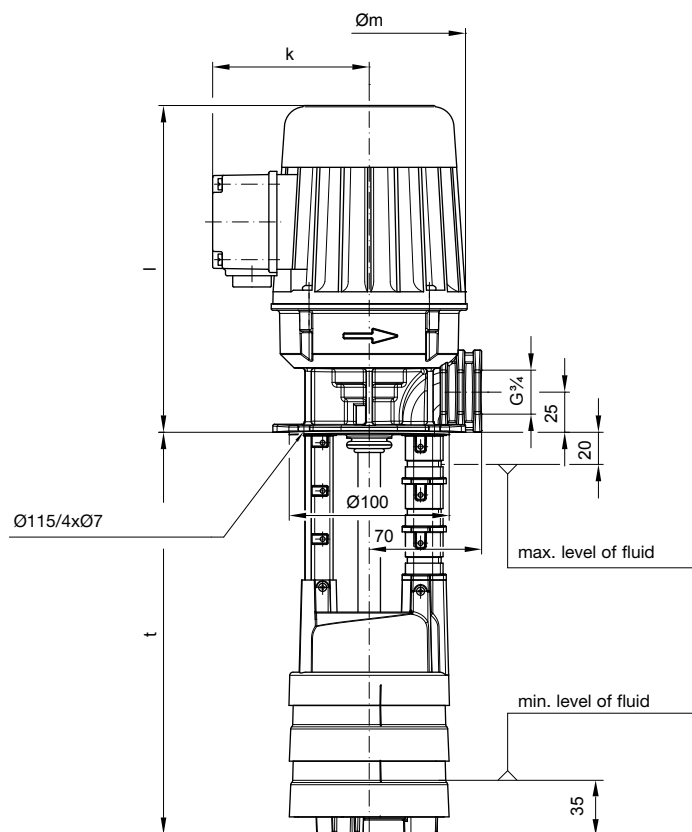
Component	Material
Intake strainer	Stainless steel 1.4301

¹⁾ Data for viscosity of ~1 mm²/s at a density of ~1 kg/dm³. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

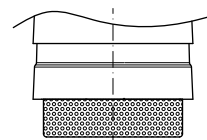


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Variation "C"
with intake strainer



PRK

Electrical data, dimensions and weights at 50 Hz

Type of pump			Immer- sion depth t [mm]	Rated motor values					Dimensions [mm]			Weight [kg]	Sonic pressure [dBA]	Pressure port series (DIN ISO 228)
Series	Frame size	Stages		Voltage Δ/Y U [V]	Motor index	Output P _N [kW]	Current Δ/Y I _N [A]	Speed n _N [min ⁻¹]	Øm	k	l			
PRK	03	01	90	230/400	D	0,25	1,5 / 0,85	2865	122	99	204	6,0 – 6,4	45	G¾
			120											
			150											
			180											
			210											
			240											
		02	270	230/400	E	0,37	1,7 / 0,98	2785	122	99	204	6,1 – 6,5	48	G¾
			125											
			155											
			185											
			215											
			245											
		03	275	230/400	F	0,55	2,4 / 1,4	2818	141,4	103	311	10,3–10,7	52	G¾
			305											
			160											
			190											
			220											
			250											
		04	280	230/400	G	0,63	2,7 / 1,5	2883	141,4	103	311	12,7–13,2	54	G¾
			310											
			340											
			195											
			225											
			255											
		05	285	230/400	H	1,1	4,3 / 2,5	2830	141,1	103	311	14,0–14,5	58	G¾
			315											
			345											
			375											
230														
260														
	290													
	320													
	350													
	380													
	410													



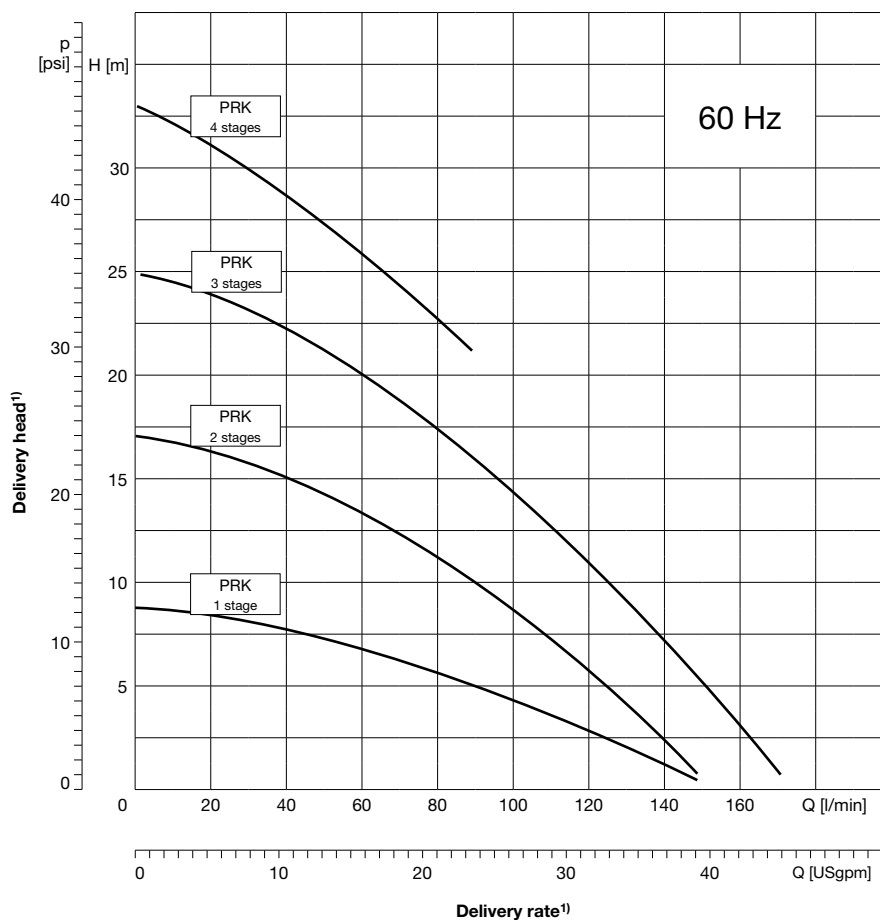
PRK – Immersion pumps, hydrostatic sealing

50-60Hz dual frequency, open impellers



Features

- Vertical multistage pump, hydrostatic sealing
- For delivery of slightly contaminated types of fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G3/4
- Wide range of immersion depths 90-410 mm



Technical data

Delivery rate $Q_{\max}$	170 l/min
Delivery head $H_{\max}$	33 m
Immersion depth $t_{\max}$	375 mm
Kinematic viscosity	max. 20 mm ² /s
Delivery temperature	+5 °C to +60 °C
Grain size	max. Ø3 mm
Contamination	max. 50 g/m ³
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Emulsions, cooling and cutting oils, cleaning liquids, water, mild acids

Mechanical design

Component	Material
Flange	POM
Base	PPS
Shaft	Stainless steel 1.4122
Impeller	POM
Diffuser	PP
Intermediate chamber	PPS
Bearings	Deep groove ball bearing with covering disk
Pumps bottom	PP
Elastomers	NBR

Variations

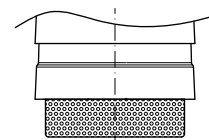
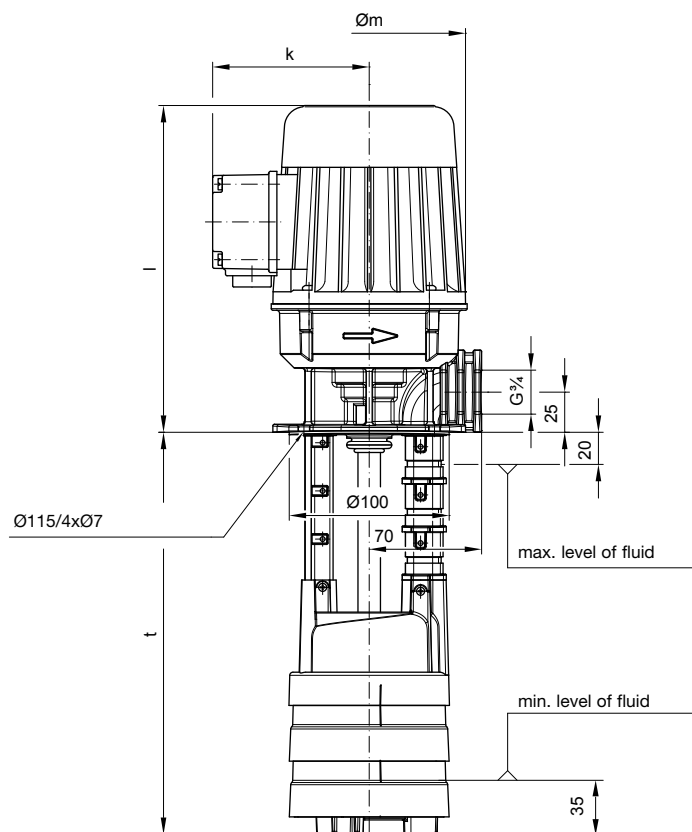
Component	Material
Intake strainer	Stainless steel 1.4301

¹⁾ Data for viscosity of ~1 mm²/s at a density of ~1 kg/dm³. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.



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PRK

Electrical data, dimensions and weights at 60 Hz

Type of pump			Immer- sion depth t [mm]	Rated motor values					Dimensions [mm]			Weight [kg]	Sonic pressure [dBA]	Pressure port series (DIN ISO 228)	
Series	Frame size	Stages		Voltage Δ/Y U [V]	Motor index	Output P _N [kW]	Current Δ/Y I _N [A]	Speed n _N [min ⁻¹]	Øm	k	l				
PRK	03	01	90	265/460	E	0,42	1,7 / 1,0	3360	122	99	204	6,0 – 6,4	48	G¾	
			120												
			150												
			180												
			210												
			240												
		270	02	125	265/460	F	0,62	2,3 / 1,3	3405	141,4	103	311	10,1–10,6	52	G¾
		155													
		185													
		215													
		245													
		275													
		305	03	160	265/460	G	0,73	2,6 / 1,5	3460	141,4	103	311	12,6–13,0	54	G¾
		190													
		220													
		250													
		280													
		310													
		340	04	195	265/460	H	1,26	4,1 / 2,4	3440	141,4	103	311	13,9–14,3	58	G¾
		225													
255															
285															
315															
345															
375															



PRK – Immersion pumps, hydrostatic sealing

Order key

PRK

P	R	K																
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Series

Frame size

03

Stages

To determine the desired number of stages the corresponding characteristics has to be used.

01 = 1 stage

...

05 = 5 stages

Materials

P = POM (standard))

Seal

B = gap bush (standard)

Pump design

S = standard design (bottom prepared for extension tube; tube available as accessory)**C** = bottom equipped with intake strainer

Immersion depth in mm

To determine the desired immersion depth the appropriate table "Electrical data, dimensions and weights" has to be used.

090 = 90 mm

...

410 = 410 mm

Motor index

To determine the desired motor index the appropriate table

"Electrical data, dimensions and weights" has to be used.

Example:

E = 0,55 kW

Power supply

01 = 230/400 V at 50 Hz; 265/460 V at 60Hz**05** = 230/400 V at 50 Hz

Motor design

CA = standard (insulation class F, IP 54, 2-pole, IE3)

Order example: PRK0304PBS255G05CA

Series: **PRK**, frame size: **03**, 4 stages, material: **P** POM plastic, seal: **B** gap bush, pump design: **S** standard design, immersion depth: **225** mm, motor index: **G** 0,75 kW, power supply: **05** 230/400 V at 50 Hz;

Motor design: **CA** standard (IE3)

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